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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,411	04/19/2004	Tsuyoshi Maeda	119275	9894
25944	7590	12/15/2005		
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER DUONG, THOI V	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/826,411

Applicant(s)

MAEDA, TSUYOSHI

Examiner

Thoi V. Duong

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 ~~is~~ are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 ~~is~~ are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>04/19/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 1 is objected to because of the following informalities: claim 1 recites the limitation "each dot" in line 1. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 5 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaneko et al. (US 2003/0038904 A1).

Re claim 1, as shown in Figs. 1, 2 and 4, Kaneko discloses a transfective liquid crystal display (LCD) having a reflective display area and a transmissive display area, the transfective liquid crystal display comprising:

an element substrate 2a having a plurality of pixel electrodes 14a with each pixel electrode including a switching element TFD 33;

an opposite substrate 2b facing the element substrate 2a;

a liquid crystal layer L disposed between the two substrates 2a and 2b; and

a reflective layer 11 being provided in the reflective display area of the opposite substrate 2b (page 5, paragraph 74),

wherein the reflective layer 11 extending directly below the switching element TFD 33.

Re claim 5, the switching element TFD 33 is a nonlinear diode element (page 5, paragraph 67).

Re claim 7, as shown in Fig. 8, an electronic device 40 includes the liquid crystal display of Kaneko (page 7, paragraphs 99 and 100).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko et al. (US 2003/0038904 A1) in view of Okamoto et al. (USPN 6,281,952 B1).

Re claim 3, the transflective LCD of Kaneko further comprises electrode layers 32 and 14b provided on both sides of the liquid crystal layer, and an alignment controlling device 16a provided in the electrode layers (Fig. 2 and page 5, paragraphs 70 and 74).

However, Kaneko does not disclose a liquid crystal with negative dielectric anisotropy as recited in claim 2, a circularly polarized light inputting device that inputs circularly polarized light to the element substrate and the opposite substrate as recited in claim 4, and an adjusting layer that makes a thickness of the liquid crystal layer

different between the reflective display area and the transmissive display area, the adjusting layer being provided at least in the reflective display area as recited in claim 6.

Re claims 2 and 4, as shown in Fig. 4, Okamoto discloses a transflective liquid crystal display comprising a liquid crystal with negative dielectric anisotropy and a circularly polarized light inputting device 16 and 17 (phase difference compensation plates) that inputs circularly polarized light into the liquid crystal layer 1 (col. 31, line 44 through col. 33, line 38).

Re claim 6, Okamoto further discloses an adjusting layer 11 that makes a thickness of the liquid crystal layer 1 different between the reflective display area 9 and the transmissive display area 10, the adjusting layer 11 being provided at least in the reflective display area 9 (col. 11, lines 44-54 and col. 60, lines 24-47).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the transflective LCD of Kaneko with the teaching of Okamoto by forming an adjusting layer that makes a thickness of the liquid crystal layer different between the reflective display area and the transmissive display area, the adjusting layer being provided at least in the reflective display area so as to attain a high contrast ratio without causing any parallax, and not only to improve the visibility under dark circumstances but also to obtain satisfactory visibility even when the ambient light is strong (col. 13, lines 35-44).

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (571) 272-


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2292. The examiner can normally be reached on Monday-Friday from 8:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached at (571) 272-2293.

Thoi Duong

12/10/2005

  
ANDREW SCHECHTER  
PRIMARY EXAMINER